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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Toshiki Nonaka

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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,989	Applicant(s) NONAKA ET AL.	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 8 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 22, 2008.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 to 4, 6, 7 and 10 to 15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over computer-generated English translation of Japanese patent 2003-105513 ("JP-513") for the reasons set forth in the previous office action dated February 26, 2009.

Response to Arguments

Applicant's arguments filed May 27, 2009 have been fully considered but they are not persuasive.

Applicant argued claims patentably distinguish over Japanese patent 2003-105513 (hereafter "JP'513") for the following reasons:

1) JP'513 discloses a steel composition containing 0.001 to <0.1% Si, preferably less than 0.08% to secure productivity, strength and reduced scale damages, and further discloses that the Si content should not exceed more than 0.1% because of

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deterioration of scale damages and surface appearance and yield ratio. In comparison, Si content in the present invention is 0.1 to 0.3% to obtain the required ductility and chemical converted coating ability, which is a very different Si content and purpose for Si compared to JP'513.

2) Present invention steel contains ferrite and martensite without retained austenite whereas prior art microstructure comprises ferrite or ferrite + bainite and the remainder martensite and/or retained austenite. Also prior art examples in tables 1 of JP'513 contain retained austenite.

3) Present invention steel exhibits a tensile strength ("TS") > 980 MPa and a value of $TS \times EI > 16,000$ as shown in attached figures 1 and 2, and formula (1) for obtaining the required ferrite volume ratio which is not disclosed or suggested in JP'513.

In response to argument #1, JP'513 teaches steel containing an upper limit of <0.1% Si which closely approximates Applicant's claimed lower Si limit of 0.1%. Since Applicant has not demonstrated (e.g. by comparative test data) that the claimed Si limit is somehow critical and productive of new and unexpected results, then a composition with 0.1%Si verses a composition with slightly less Si (<0.1%) would depict a mere difference in the proportion of element without any attendant unexpected results and would not patentably distinguish claims over prior art. According to page 7 of Applicant's specification, Si up to 0.3% is permissible and Si range of up to 0.1% is preferred for hot-dip galvanization.

In response to argument #2, claim 9 of JP'513 teaches a steel plate microstructure comprising ferrite as the main phase at 70 to 97% and austenite and /or

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martensite as the secondary phase at 3 to 30%. Prior art teaches austenite as optional and therefore can be omitted. Also contrary to Applicant's assertion, JP'513 in table 3 teaches specific examples example G16, G17, H18, H19, and H20 having a microstructure comprising ferrite and martensite without austenite. Note starting from the left side of table 3, the 4th column indicates vol.% ferrite , the 6th column indicates vol.% martensite and the 7th column indicates vol.% austenite base on an oral translation by US Patent office translator.

In response to argument #3, JP'513 in table 1 discloses specific example that exhibit $TS \times EI > 1600$ but TS is less than 980 MPa. Despite the lower TS, JP'513 still teaches a general composition which would include steels having higher TS. According to paragraphs [0027] and [0038] of JP'513, alloying constituents such as Mn, Ti and/or Nb when added to alloy in higher quantities promote increase in strength and intensity. Hence it would be a matter of routine optimization of alloying constituents to achieve the desired balance of strength and elongation which is well within the skill of the artisan and productive of no new and unexpected results.

JP-513 does not teach equation (1) as recited by claim 1 but it has been well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, see *In re Cooper and Foley*, 57USPQ117. In the instant case, JP'513 teaches securing a ferrite phase and achieving high elongation which are properties attributed to the equation and when calculated, examples in table 1 closely meet equation.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/